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THE PLANT DISEASE REPORTER

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THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

Vol. XIII June 1, 1929 Number 2

SURVEY RECEIVES MANY REPORTS AND SPECIMENS

A count has just been made of the number of reports and specimens received by the Plant Disease Survey during the 12-month period from July 1, 1928 to June 1, 1929. A total of 6,578 original reports on the plant diseases of 1928 were received. Practically all of these came from collaborators although a considerable number were also received from other plant pathologists in the Bureau of Plant Industry and in the states.

Specimens or records of specimens totaling 3,400 were obtained. Nearly two-thirds of these were West Virginia fungi collected during the course of a special survey in that state.

In addition to reports and specimens, literature references, abstracts, and index cards numbering about 20,000 were prepared in the Washington office and placed on file. R. J. H.

APPLE SCAB NOTES

New York: Field assistants of the Department of Entomology and Plant Pathology, New York State College of Agriculture, report in the Weekly News Letter Concerning Insect Pests and Plant Diseases, May 27 as follows concerning apple scab.

Suffolk Co.: Readily found this past week.

Dutchess Co.: Infections very light in carefully sprayed orchards. Very evident on unsprayed trees. All ascospores not yet discharged.

Ulster Co.: Appearing on newly formed leaves. Growers who have followed schedule and sprayed well are experiencing little infection.

McIntosh leaves examined May 21 showed that perithecia still contains many spores

Onondago Co.: Present in all orchards on McIntosh and all early varieties where the delayed dormant application was not applied before the extended rainy period early in April.

Chautauqua Co.: Developing very rapidly. Secondary infections apparently showing up. Spraying is burning out some of the lesions.

Ontario Co.: Very noticeable even in sprayed orchards.

Wayne Co.: Plentiful in unsprayed and thoroughly sprayed orchards. The rain of April 20 caused considerable infection. McIntosh which were not sprayed until April 23 showed from 30 to 40 per cent infection on blossom spur leaves. These trees have been well covered since that time. In general trees which were not sprayed until after the rains of April 20 and 25 showed about 60 to 80 per cent infection on the leaves which were exposed at that time.

Monroe Co.: Quite generally distributed.

Oswego Co.: Does not appear to be serious as yet in orchards that were well sprayed.

Pennsylvania: Scab spores are still shooting from the old perithecia formed in last years leaves. Scab lesions are plentiful on unsprayed or incorrectly sprayed apple leaves, and thousands of secondary spores are being formed on each of these scab spots which are capable of causing new infections.

A check up on the apple scab situation in the southern part of Pennsylvania shows that apple growers who sprayed according to the spray service recommendations are practically free of the first scab infections which took place from April 3 to 12, and that the growers who missed the first spray or used inferior spray materials have considerable scab, and that heavy infections occurred in unsprayed orchards. It was found in Adams, Berks, Chester, Delaware, Lancaster, Schuylkill and York Counties, that a total of only five scabby leaves (or 1 scabby leaf in 2,000) were seen in the 12 orchards sprayed according to the spray service, that there was an average of 8.9 per cent scab infection on the leaves of the orchards where the growers failed to apply the first recommended lime sulfur spray, that there was 18.8 per cent leaf infection in the 9 unsprayed orchards, that there was 8.1 per cent infection on the leaves in the two orchards where the growers used sulfocide instead of lime sulfur. (Kirby, May 11)

During the past week leaf counts have been made to determine the amount of leaf infection of apple scab that is making its appearance in Union, Snyder, Cumberland, Franklin, Dauphin and Luzerne Counties. The following is a summary of results. Counts in orchards where the

recommendations of spray service were followed showed an average of .29 per cent (almost 1 scab leaf in 400) of the leaves scabbed. In contrast to this where lime sulfur (liquid or dust) was applied poorly or some sprays were missed there was an average of 13.25 per cent scabby leaves. Where sulfocide was used there was an average of 22 per cent scabby leaves. The average of poor spraying over the use of low grade material gave an average of 12.68 per cent scabby leaves. The average of unsprayed orchards was 33.42 per cent scabby leaves.

It was found that the early sprays were very necessary for apple scab control this year and since this is a scab year it has been necessary to follow spray letters to the letter. Any variation has resulted in scab infection. (Zundel, May 13)

Virginia: Although weather conditions have been ideal for scab infection in northern Virginia, only a slight infection is in evidence to date. South of Harrissonburg and in the Piedmont, where a larger percentage of scabby varieties are found, we also find a much heavier average scab infection. Five years ago scab was the most serious disease in the apple orchards of Frederick County which produces approximately one-third of Virginia's crop. Today, the scab situation is well in hand, a direct result of concerted spraying efforts every year for the past five years. The most susceptible varieties are no longer infected and it has been a difficult matter to find orchards where sufficient infection on checks occurs for experimentation. First occurred May 1. (Schneiderhan, May 25)

West Virginia: Found present in many orchards and is likely to cause considerable damage unless very carefully spraying proocdures are followed out. The season has been extremely unfavorable and it was practically impossible for most of the growers to get on their pink spray. (Giddings, May 20)

Illinois: This is to report that we found scab rather general on apples in Calhoun County (near St. Louis) on April 25, and at Urbana at the same time. At this time the apples were beginning to drop their petals, but it was still a little early for the calyx spray in these sections. The cool damp weather of the last two weeks has resulted in a very general epidemic of early apple scab and it is probable that the growers will have a great deal of trouble controlling the disease. I have seen very little pedicel infection. In southern Illinois the cool rainy weather during the blooming of the apples reduced the set to such an extent that there will be a very light crop in spite of an exceptionally heavy bloom. The dropping of the flowers in this section, however, was not due to scab but to lack of pollination. (Anderson, May 3)

NOTES ON FIRE BLIGHT

New York: Fire blight has been oozing in both pears and apples in Clyde County, but to a rather limited extent as yet. (New York Weekly News Letter, May 13)

Virginia: The outstanding note on disease occurrence in fruits in 1929 is the unusually heavy infection by fire blight. Usually we find a slight and scattered infection of terminal twigs of Yorks and Transparents in Virginia and rarely during the past 7 years have we found any blossom infection. This year, however, we have unquestionably the heaviest fire blight infection on record in Virginia. In certain orchards near Crozet fruit clusters have been infected to the extent of 55 per cent in addition to heavy twig infection. A possible explanation of this epiphytotic of fire blight may be found in the nature of the weather during the blossoming period. On April 6 to 9 temperatures as high as 92 were recorded. This caused a bad development from green tip to full bloom in 36 hours in some instances. When approximately 60 per cent of the blossoms had opened, the weather turned cold and rainy for two weeks while the blossoms persisted. A blossoming period of three weeks occurred in many orchards in Virginia in 1929. This fact correlated with wet, cool and cloudy weather may explain the blossom infection by the fire blight organism. Since the blossoming and weather conditions have no similarity with any previous conditions on record and furthermore, since blossom infection has been rare in Virginia orchards, the logical inference would seem to point to the weather conditions as the major factor in this widespread occurrence of the disease. Fire blight will be a disease of economic importance in Virginia and neighboring states this year. In the order of susceptibility to the disease we would list the varieties as follows: Grimes Golden, York Imperial, Transparent, Old Winesap, Stayman Winesap, and Delicious. The first occurrence of this disease was noted on April 27. (Schneiderhan, May 25)

West Virginia: I found a very large amount of collar blight on Grimes Golden trees in two orchards examined, one in Berkeley and one in Jefferson County. It is evident that most of the development occurred last year. One large orchard with Grimes as interplants had at least 75 per cent of the trees diseased and about 20 to 25 per cent completely girdled, although the trees still appeared normal to the casual observer. (Giddings, May 20)

Illinois: The first report of fire blight of apples was received today from Saline County. The apples in that section are beyond the calyx spray stage, but infection evidently occurred near blooming time, since the disease in this case was exclusively blossom blight. (Anderson, May 3)

Tennessee: At this time the season is far enough advanced so that we have definitely determined that fire blight is much more serious than usual. This applies to all sections of the State. Weather conditions have been especially favorable for the spread of the bacteria both during the blossom period and since that time.

A wide difference occurs in the amount of blossom blight on apples, but in extreme cases it would run much over 50 per cent. In the more resistant varieties there is little or no indication of blossom blight. (McClintock, May 27)

North Carolina: The infection of blossom blight began the last part of April and extended through May 4. During this period the weather was cool, accompanied by frequent rains. The degree of infection of blossom blight as per varieties is as follows:

Stayman	light to medium
Delicious	light
Golden Delicious	medium to heavy
Grimes Golden	very heavy
Rome Beauty	very light
Red Winesap	light
Arkansas Black	none
Maiden Blush	very heavy
Virginia Beauty	none
Horse apple	heavy
York	heavy
Yellow Transparent	heavy
Early Harvest	medium

In locations where there was good air drainage and where the varieties confined to those listed above had light infection, there was little loss from this blight disease. In low elevations and where a large number of varieties existed, the blight situation was very serious. It cut the prospects for crop to around 25 per cent in one county. Aphis infection during this period is very severe in blighted orchards. (H. R. Niswonger, May 16)

RUST OF APPLES (GYMNOSPORANGIUM JUNIPERI-VIRGINIANAE)

New York: All three forms of the rust are common on red cedar, the canker-like lesions of the quince rust and the cedar apples of both the hawthorn and the apple rusts in Ulster County. Telial horns of the cedar apples are 1/4 inch long. (New York Weekly News Letter, April 22)

Maryland: Found in an orchard in Charles County on April 24. (Jehle, May 1)

District of Columbia: Specimen collected by C. A. Ludwig, May 25. Pycnial stage only.

Virginia: Infection is very severe in orchard areas bordering uncut cedar areas. Occurred very early this year, the first occurrence being noted May 1 compared with May 23, 11, 30, 10, and 10 in 1924, 1925, 1926, 1927, 1928, respectively.

Cedar rust spore ejections have been recorded on March 14, April 14, 5, 9, 10, 14, 15, 22, 26, 28, May 2, 6, 13, and 18. (Schneiderhan, May 25)

Wisconsin: Specimen of rust on cedar sent in by R. E. Vaughan May 22 from Green Lake County.

Kansas: Cedar apple rust is very severe in Kansas this season. Apples are becoming infected very severely and the variety Winesap which is considered resistant to rust under Kansas conditions is being severely infected this year.

Insofar as prevalence of galls on cedar trees are concerned I have never seen cedar so heavily loaded with cedar apple galls as they are in the vicinity of Manhattan this spring. (Elmer, May 16)

BLACK ROT OF APPLE (PHYSALOSPORA MALORUM)

Maryland: Found in an orchard in Charles County on April 24. (Jehle, May 1)

Pennsylvania: First observed on unsprayed apple leaves at Hamburg, Berks County on May 7. During the remainder of the week the disease was found to be very general over the southeastern part of the state. (Kirby)

Virginia: Frog-eye appeared on April 20 and is quite a common disease on poorly pruned Ben Davis, York and Stayman trees. Infection in such trees is quite local being beneath some cankered limb from which the inoculum spreads in a cone shaped infection zone beneath. Frog-eye has not been a serious orchard disease in properly sprayed orchards. (Schneiderhan, May 25)

POWDERY MILDEW OF APPLE

New York (Orange Co.): Showing up in some orchards. (S. Jones)
(Ulster Co.): Showing up on terminal growth of Baldwin and Winesap, May 27). (W. S. Salisbury) (New York Weekly News Letter, May 13)

Pennsylvania: From 1 to 10 per cent of the terminal shoots of unsprayed apple trees were found to be infected at New Bloomfield, Perry County, on May 1 and 10, and a trace of infection was found on a Smokehouse tree at Media, Delaware County, on May 8. (Kirby, May 11)

Virginia: Powdery mildew has in recent years become increasingly important on young trees of Jonathan and Ben Davis. It is particularly severe this year because the rapidity of development from the prepink to full bloom prevented the application of the pink spray in approximately 90 per cent of the orchards in northern Virginia this year. First appearance April 20. (Schneiderhan, May 25)

LEAF SPOT OF QUINCE AND PEAR

Specimens of Fabraea maculata on young quince leaves collected in Washington, D. C., May 24, by C. A. Ludwig have just been received. The leaves were heavily spotted with 12-90 spots per leaf. Spores were just beginning to mature. Reports of this disease have also been received from West Virginia and Illinois as follows:

West Virginia: While working at the laboratory at Inwood a few days ago some spots on quince leaves were called to my attention and, upon examination, I found spores of Entomosporium (Fabraea). The infection appeared to be coming from dead twigs. (Giddings, May 20)

Illinois: Fabraea leaf spot of pear appeared about two weeks ago in southern Illinois but was very light. The first spots are now showing mature pycnidia and we may expect a heavy secondary infection. This disease has been quite serious in southern Illinois during the last two or three years, even on Kieffer pears. Before that the growers had never experienced any particular trouble. (Anderson, May 3)

PEACH LEAF CURL

Of the four states reporting on peach leaf curl, two, New York and Kansas report a severe infestation, and the two others, Kentucky and Illinois, report only very slight amounts. Let's hear from other sections so that we can see how the situation lines up for the country as a whole. R. J. H.

New York: Judging from the reports in the New York State College of Agriculture Weekly News Letter Concerning Insect Pests and Plant Diseases for May 27 there is an abundance of peach leaf curl in that State this year. In Suffolk County it appears to be more severe than last year. In Orange County it is very bad on unsprayed trees and noticeable in some orchards that have been sprayed. One grower who sprayed late has much less curl than on trees which were left as checks and which showed 100 per cent. In Dutchess County only slight amounts were observed except on neglected trees. From Chautauqua County reports of severe infestation were received even where the dormant spray was applied. Apparently it did not check curl in all cases this season. In Ontario County it was very severe in unsprayed or late sprayed orchards. In some of the orchards practically every leaf seemed to be affected. In Wayne County orchards which received lime sulfur before the buds swelled showed perfect control but in unsprayed orchards infection is severe. In Monroe County it seems to be the worst it has been since 1924.

Kentucky: You may be interested in knowing that there is practically no peach leaf curl in Kentucky in sprayed and unsprayed trees. (Valleau, May 6)

Illinois: Repeating the conditions in 1928, leaf curl appeared quite late. The infection was first noticed on April 18 near Villa Ridge. It appeared more generally over the State during the second and third weeks of May. Leaf curl is not prevalent in well cared for orchards in southern Illinois, in the Olney-Flora fruit section and along the northern edge of the peach section.

There is evidence of spread this spring from unsprayed check rows to the sprayed rows in some experimental plots. In several instances the sides of the sprayed trees facing the checks showed marked increase in prevalence of leaf curl over the sides facing the sprayed rows. (Anderson, May 29)

Kansas: From reports obtained from various parts of the state it appears that peach leaf curl is much more serious here in Kansas than has been the case in several years. In many cases where growers failed to spray their trees the larger portion of the leaves are infected. (Elmer, May 16)

PHONY PEACH QUARANTINE AND ERADICATION MEASURES

The quarantine designed to prevent the spread of phony peach to new areas is effective today (June 1). The areas now affected cover 64 counties in central and western Georgia and one county (Lee) in Alabama. The interstate shipment from

the regulated areas of peach and nectarine trees and roots and all other trees and shrubs grafted or budded on peach or nectarine roots is allowed only under permit from the United States Department of Agriculture.

The permits are to be issued only to nurseries "within which and within one mile of which no infection of the phony peach disease has existed for at least two years prior to the proposed date of movement."

Phony peach has been known in Georgia for about 50 years. It has gradually spread until it is now found in districts that produce 90 per cent of the commercial crop of the State. It has not been found in surveys made in other States except at one place in Alabama.

Phony peach is a communicable disease of which the infective principle appears to be confined to the root system. According to L. M. Hutchins (Phony disease of the peach. (Abstract) Phytopath. 19: 107. Jan. 1929) affected trees never recover from the disease, neither do they die from it but live on for many years. Losses are due to the marked dwarfing effect, to decrease in size and number of fruits, and to poor quality of the fruit. After a few years phony trees bear few if any marketable peaches. Phony trees produce short terminal growth, profuse lateral branching, and deep green foliage.

An eradication campaign is being undertaken by the Federal and State Departments of Agriculture.

BROWN ROT TWIG AND BLOSSOM BLIGHT OF PEACH (SCLEROTINIA FRUCTICOLA)

Pennsylvania: From a trace to 1/2 per cent twig infection was found on May 8 at Media, Delaware County and Northbrook, Chester County. (Kirby, May 11)

Illinois: There was no indication of blossom blight of peaches due to brown rot this season. Apothecia of Sclerotinia were unusually abundant in the peach orchards this spring, but apparently caused no serious blossom infection. (Anderson, May 3)

BOTRYTIS ROT OF STRAWBERRIES

Dr. N. E. Stevens reports the worst epidemic of Botrytis on strawberries he has ever seen in the South, by far the worst at Chadbourn during the last four years. This he attributes to unseasonably cool and wet weather. The following table gives the mean maximum and mean minimum temperature for the first week of the strawberry shipping season at Chadbourn for the past four years. The carrying qualities of the strawberries was very good in 1926 and 1927, poor in 1928, and, as already noted, very bad indeed in 1929.

1929	67 mean maximum	44 mean minimum
1928	71	49
1927	72	53
1926	81	52

Office Hort. Crops and Diseases, May 15).

SCLEROTINIA ON BLUEBERRIES IN NEW JERSEY

The following report on the Sclerotinia mummy berry disease and Sclerotinia twig blight of blueberries is by R. B. Wilcox from Tom's River, New Jersey. The disease is much more severe than usual.

The temperature has been uniformly cool. Rain has fallen at some time during nearly every 24 hours, or at least every second day. There has been a breeze most of the time, reaching the force of a heavy wind on several occasions. Good weather for infections.

The blueberry mummies have produced apothecia and, in most cases, disappeared. The first cases of fungous infection of growing parts was a browning of young foliage shoots, especially near the ground on watersprouts. These soon produced what was apparently the conidial stage of the Sclerotinia fungus. Nearly all of the blight was found on the Adams, Harding and Dunfee varieties. (Wilcox, May 15).

On May 3d there was the most severe and uniform epidemic of twig blight that I ever saw from any cause. On the 4th, a large number of the little brown shoots were producing large numbers of conidia. The Dunfee, Adams and Harding were still much the worst, but Rubel was developing a considerable amount of blight, as was also the Cabot, which previously had been considered immune. Most of the hybrid varieties, however, showed very little of the trouble. (Wilcox, May 15).

BLIGHT (BACTERIUM JUGLANDIS) FOUND ON WALNUT IN ARKANSAS

H. R. Rosen reports as follows; (May 23):

Blight on Persian (English) Walnut, (Juglans regia) found severely affecting the leaves of several trees on a lawn in Fayetteville. First report of this disease in this state so far as known. M. B. Waite reported that he had observed this disease in Louisiana and Texas (Rept. Proc. 4th Ann. Meeting, Northern Nut Growers Assoc. 1913, p. 56, 1914) but these two states are not given in the "Check List of Diseases of Economic Plants in the United States.".

ALFALFA DISEASES IN MISSOURI

Considerable injury to alfalfa plantings occurred during the past winter throughout the entire state. Much of the injury is attributed to winter-killing, followed by decay this spring through the action of various semi-parasites, particularly species of Fusarium. In many fields over 50 per cent of the alfalfa is dead. Two alfalfa diseases heretofore of little importance in Missouri, have occurred in rather severe outbreaks in local plantings. One is Pleosphaerulina spot, caused by Pleosphaerulina briosiana Poll. The first cutting in a field of alfalfa in Cape Girardeau county was badly affected, but the total loss was not great. The other disease, is stem rot caused by Sclerotinia trifoliorum Eriks. Several fields in the southeast Missouri lowlands (Dunklin County) are seriously affected. Over 90 per cent of the plants are down in one field. Sclerotia are abundant (May 1) around crowns of the plants. The causal organism has been isolated. As far as local records go, this is the first time this fungus has been found on alfalfa in Missouri. (Scott, May 23).

POWDERY MILDEW OF CEREALS (ERYSIPHE GRAMINIS)

BARLEY

Texas. Prevalent - Bell County. (Dana).

Virginia (Arlington Farm). Causing injury May 9. (Taylor. Cereal Courier, U.S.D.A. 21 (10): 137).

RYE

Kansas. Very severe. (Johnston).

WHEAT

Kansas. Very severe in nursery. (Johnston).

COVERED AND LOOSE SMUTS OF BARLEY

According to J. W. Taylor (Cereal Courier 21 (10)) deep planted barley at the Arlington Farm showed a higher percentage of infection by both smuts on May 9.

FOOT ROTS OF WHEAT IN MONTANA

P. A. Young reports that considerable damage occurred in one part of Gallatin County. In two fields, 75% of the plants were killed and were reseeded. Other fields showed 10 to 30% damage. The trouble is probably due to Typhula graminum.

In Fergus and Judith Basin Counties, a foot rot (due probably to a Helminthosporium) caused great damage to early planted winter wheat.

LEAF RUST OF WHEAT

Reports of C. O. Johnston (Cereal Courier, U.S.D.A. 21 (7)(10); April 4 and April 30, indicate that this rust apparently overwintered in most localities in Texas, Oklahoma and Kansas.

At Manhattan, Kansas on March 18 a small quantity of leaf rust was found on the lower leaves of plants in the nursery. Flecks but no uredinia had appeared on these plants late last fall. There is excellent evidence that the rust survived as mycelium in the leaf tissues.

Throughout Kansas, scattered uredinia were confined to old basal leaves. If rainy weather should continue during May, infection will undoubtedly be considerable throughout the southern Great Plains.

SPECKLED LEAF BLOTCH OF WHEAT

A severe outbreak of speckled blotch of wheat caused by Septoria tritici Desm. occurred this spring in quite a number of fields in Scott County, Missouri. A large number of plants in some fields failed to recover from the early attacks of the fungus so that the stand was substantially reduced. It is thought that the unusually warm and moist weather in March was largely a contributing factor. The greatest damage was apparent during the first two weeks of April. (Scott, May 23).

STEM RUST OF WHEAT

According to The Rust Reporter, Office Cereal Crops and Diseases 9 (1) May 10, infection on barberries is appearing earlier than last year in most of the barberry eradication states east of the Mississippi River.

C. O. Johnston (Cereal Courier, U.S.D.A. 21(10)) in Kansas says no infection of barberries had been observed up to April 30.

In Virginia, F. J. Schneiderhan remarks that inspections show the common barberry to be used extensively in landscape plantings.

TOMATO BACTERIAL CANKER IN MISSISSIPPI

Bacterial canker of tomatoes caused by Aplanobacter michiganense has just been located in serious form in the large tomato-growing area of Mississippi around Crystal Springs. This is the first report of this disease for Mississippi.

In addition to the injury caused by the usual systemic infection, a heavy fruit spotting, similar to that found last year in Georgia by Boyd, has occurred. Unusually windy and rainy weather has prevailed in that section and wind-blown rain has evidently disseminated the pathogen from open cankers. There was also clear evidence of systemic infection initiated through hail injury lesions. The marketable crop of fruit has been reduced very seriously, especially in one planting of 37 acres where the percentage of infected vines is practically 100 per cent. All of these heavily infested fields, and others less heavily infested on other farms, were of the Gulf State Variety. Mosaic, Alternaria leafspot and Septoria leafspot were present in the same fields in varying degrees. (Mary K. Bryan, May 29).

LATE BLIGHT OCCURS IN EARLY POTATO SECTIONS

Phytophthora infestans has been reported recently from the Charlestown section of South Carolina and from Louisiana. Occurrence in the latter state seems to be exceedingly rare.

South Carolina: Week before last I found a severe epidemic of the late blight of potatoes on several of the farms of Edisto Island near Charleston, South Carolina. On one place of 100 acres, the manager said he fully expected 100 barrels per acre but he would not get 60 barrels unless he could control the disease on the Green Mountain potatoes. This same situation was said to exist on three other farms owned by the same man, making a total of 492 acres of potatoes. (Armstrong, May 13).

Louisiana: An interesting development of late blight, Phytophthora infestans, was noted in a planting of Bliss Triumph potatoes in the Horticultural Garden on the University Farm, Baton Rouge, during the latter part of April. The disease was not noticed until almost harvest time, because of the prevalence of tip burn which had caused the plants to appear ragged and brownish. The weather had been dry and fairly warm for the two weeks preceding the time the blight was noticed, which probably prevented a very serious development of the disease. In small areas, most of the plants were killed down; in others, the damage was slight.

The certified seed from which the plants were grown came from Eagle River, Wisconsin. This development of late blight was of especial interest to us, because it has only been observed on two previous occasions, and then, only in a very mild form, during the twenty years that Dr. Edgerton has been in Louisiana. (Tims, May 23).

SCLEROTIUM ROLFSII ON POTATO

Arkansas: Sclerotium rolfsii was found on Irish potatoes at Hope, Arkansas, May 20, 1929. Few plants producing rosette-like symptoms on tops of plants, small tubers in axles of leaves--due to a decortication of portions immediately below soil line. Sclerotia found in each instance in diseased parts. Extremely moist, cool weather up to present. (Rosen, May 23).

TOMATO STREAK, MISSOURI

"A severe outbreak of streak (apparently identical to that described by Vanterpool, Phytopath. 16: 311-331. 1926.) occurred in a large planting of tomatoes in a local greenhouse during March. (Columbia, Boone County). Numerous varieties were attacked. The plants were quite large when the first symptoms appeared, averaging at least 3 feet in height. Disease first appeared on one of two plants but by the first of May had spread over the entire planting which is now in very bad condition. The brown sunken areas on stems, and necrotic spots on leaves are very characteristic of the streak. There were also some evidences of mosaic in this planting, characterized by mosaiced leaves, and filiform-leaf. However, the mosaic was not widespread over the entire planting. Efforts to isolate any causal organism from the necrotic tissue on tomato stems and leaves proved futile." (Scott, May 23).

SYCAMORE BLIGHT (GNOMONIA VENETA) IN KANSAS

O. H. Elmer reported (May 16) an epiphytotic of sycamore blight in Kansas. Many trees had practically 75 per cent of their leaves dead.

A specimen of Gnomonia veneta on sycamore collected at Manhattan was received from C. O. Johnston, who says:

"This disease is very severe on sycamores in the vicinity of Manhattan this spring, many trees having been defoliated shortly after the leaves came out. Old trees seem to be most severely injured, while young trees seem to escape. Many large trees have only a few green leaves left and many of these bear angular killed areas. Old trees have many twig and branch cankers while young trees have few or none. Killing of entire leaf spurs is very characteristic." (Johnston, May 27).

DOTHICHIZA CANKER OF LOMBARDY POPLAR FOUND IN MISSOURI

Specimens of Lombardy poplar affected by Dothichiza populea Sacc. & Briard were received from I. T. Scott of Missouri with the following report:

"Specimens of limbs of Lombardy poplar were recently received from a nursery in eastern Missouri which were badly infected with the poplar canker, Dothichiza populea. Many trees in nursery row are affected. May have been carried in from other sections of the country in young stock. So far cankering is not severe but numerous fruiting-bodies of the fungus are evident over much of the surface of the limbs. It is quite probable that severe cankering will follow the appearance of the fungus this spring. This is the first record that we have of its occurrence in this state." (Scott, May 23).

PHYTOPHTHORA BLIGHT OF LILAC

"Phytophthora syringae was found fruiting on severely blighted young lilac shoots in the grounds of the Department of Agriculture on May 2 by Florence Hedges. The diseased shoots were blackened and had the appearance of a severe lilac blight (caused by Bacterium syringae) infection or of pear twigs attacked by fire blight. This is the first time that this disease has been reported in this country, says Miss Hedges, although it has been known in Europe since 1905. It causes much damage in Holland during springs having abnormal rainfall." (Office Hort. Crops and Diseases, May 15).

BOTRYTIS BLIGHT ON PEONIES IN ARKANSAS

What seems to be the first report of Botrytis on peonies in Arkansas has been received from H. R. Rosen. He states that the disease was first noted on May 4, when it was found scattered in home gardens in Fayetteville. In a nursery near Fayetteville, it had destroyed about 60 per cent of the blossom buds of extensive plantings. Some leaf spotting and rotting were also found but no stem rotting.

ROSE RUST IN KANSAS

O. H. Elmer sent in specimens of aecial stage of a rose rust collected at Manhattan, Kansas, with the remark that: "There is an unusual amount of this rust present in Kansas this season and we are daily being asked about it from different localities in the state." R. Davidson of the Office of Mycology and Disease Survey determined the rust as probably Phragmidium subcorticinum.

NEMATODES ON VARIOUS PLANTS

CACONEMA RADICICOLA:

On celery and beets, coll. C. L. Watson, Fort Myers, Florida, May 16, received from H. C. Gouldman. Det. N. A. Cobb. Celery heavily infected.

On cyclamen, coll. E. W. Mendenhall, Columbus, Ohio. Det. N. A. Cobb.

TYLENCHUS DIPSACI:

The following collections were received through members of the Plant Quarantine and Control Administration:

On bulbous Iris. North, Virginia, coll. J. M. R. Adams, May 7. Rec'd. from E. R. Sasscer. Det. N.A.Cobb. Foreign origin - Holland.

On Lilium longiflorum. Paris, France. Coll. M. P. Vayssiere, Entomological Station, November 26, 1928. Det. N. A. Cobb.

On Narcissus. Virginia. At North, var. Emperor, May 7; unnamed var., May 9. At Cradle Point, May 9, vars. King Alfred, Emperor, Victoria, unnamed. Coll. J. M. R. Adams. Rec'd. from E. R. Sasscer. Det. N. A. Cobb.

On Narcissus. Laurens Koster var. Coll. Mt. Clemens, Michigan, W. W. Wood, May 21. Rec'd. from E. R. Sasscer. Det. G. Steiner. Foreign origin - Holland.

ADDITIONAL SPECIMENS RECEIVED

Stereum albobadium (Schw.) Fr. on Syringa vulgaris. Washington, D. C., coll. G. Hamilton Martin, May 5. Det. J. A. Stevenson.

Earlea speciosa (Fries) Arth. on Rosa humilis. Near Canal below Widewater, Maryland. Coll. Mary G. Van Meter, May 19 and May 26. Det. R. Davidson.

Bacterium tumefaciens and Cytospora nivea on Populus bolleana. Lincoln, Nebraska, April 26. Coll. L. M. Gates. Det. G. G. Hedgcock.

Lentinus lepideus Fr. on Pinus strobus. Washington, D. C., May 23. J. A. Stevenson and R. J. Haskell.

Didymaria didyma (Unger) Lindau (D. ungeri Cda.) on Ranunculus sp. Washington, D. C., coll. C. A. Ludwig, May 13. Det. R. J. Haskell.

Melampsora euphorbiae-gerardianae W. Müller on Tithymalus commutatus. Along Canal near Widewater, Maryland. Coll. Mary G. Van Meter, May 19. Det. R. Davidson. This species is distinguished from M. euphorbiae (Schub.) Cast. by differences in the teliospores; no teliospores on specimen.